

AB-125U

09/929,596

IN THE CLAIMS:

The status and content of each claims follows.

1. (previously presented) A method for treating a patient with urgency, frequency, urinary incontinence, and/or fecal incontinence comprising:

providing at least one stimulator having at least two electrodes;

implanting the at least one stimulator adjacent to at least one parasympathetic target that innervates at least one urinary, gastrointestinal, and/or other pelvic structure;

providing operating power to the at least one stimulator;

providing stimulation parameters to the at least one stimulator;

generating inhibitory stimulation pulses in accordance with the stimulation parameters; and

delivering the inhibitory stimulation pulses to nerves and tissue adjacent to the at least two electrodes to inhibit parasympathetic input to said urinary, gastrointestinal, and/or other pelvic structure in order to treat urgency, frequency, urinary incontinence, and/or fecal incontinence;

wherein the stimulator has a size and shape suitable for placement adjacent to the at least one parasympathetic target.

2. (cancelled)

3. (original) The method of Claim 1 wherein the at least one parasympathetic target comprises one or more of the sacral nerve roots and sacral spinal nerves.

AB-125U

09/929,596

4. (original) The method of Claim 3 wherein the at least one sacral nerve comprises the third sacral nerve.
5. (original) The method of Claim 1 wherein the at least one parasympathetic target comprises at least one of the pelvic splanchnic nerves.
6. (original) The method of Claim 1 wherein the at least one parasympathetic target comprises one or more of the rectal, inferior hypogastric, prostatic, vesical, and uterovaginal nerve plexuses.
7. (original) The method of Claim 1 further comprising:
providing at least one sensor;
using the at least one sensor to sense at least one physical condition; and
determining the stimulation parameters based upon the at least one sensed condition.
8. (original) The method of Claim 1 wherein providing stimulation parameters comprises receiving the stimulation parameters from at least one external appliance.
9. (original) The method of Claim 1 wherein providing operating power comprises receiving the operating power from at least one external appliance.

AB-125U

09/929,596

10. (original) The method of Claim 1 further comprising providing and implanting more than one stimulator.

11. (currently amended) A method for treating a patient with urinary and/or fecal dysfunction comprising:

providing at least one stimulator having at least two electrodes;

implanting the at least one stimulator adjacent to at least one parasympathetic target that innervates at least one urinary, gastrointestinal, and/or other pelvic structure;

providing operating power to the at least one stimulator;

providing stimulation parameters to the at least one stimulator;

generating inhibitory stimulation pulses with said at least one stimulator in accordance with the stimulation parameters;

delivering the inhibitory stimulation pulses to nerve fibers adjacent to the at least two electrodes to inhibit parasympathetic input to said urinary, gastrointestinal, and/or other pelvic structure in order to treat urgency, frequency, urinary incontinence, and/or fecal incontinence;

generating excitatory stimulation pulses with said at least one stimulator in accordance with the stimulation parameters; and

delivering the excitatory stimulation pulses to nerves and tissue adjacent to the at least two electrodes in order to treat urinary and/or fecal retention;

wherein the stimulator has a size and shape suitable for placement adjacent to the at least one parasympathetic target.

12-13. (cancelled)

AB-125U

09/929,596

14. (original) The method of Claim 11 wherein the at least one parasympathetic target comprises one or more of the sacral nerve roots and sacral spinal nerves.
15. (original) The method of Claim 14 wherein the at least one sacral nerve comprises the third sacral nerve.
16. (original) The method of Claim 11 wherein the at least one parasympathetic target comprises at least one of the pelvic splanchnic nerves.
17. (original) The method of Claim 11 wherein the at least one parasympathetic target comprises one or more of the rectal, inferior hypogastric, prostatic, vesical, and uterovaginal nerve plexuses.
18. (original) The method of Claim 11 further comprising:
providing at least one sensor;
using the at least one sensor to sense at least one physical condition; and
determining the stimulation parameters based upon the at least one sensed condition.
19. (original) The method of Claim 11 further comprising providing and implanting more than one stimulator.

AB-125U

09/929,596

20. (previously presented) A method for treating a patient with urinary and/or bowel dysfunction comprising:

- providing at least one stimulator having at least two electrodes;
- implanting the at least one stimulator adjacent to at least one sympathetic target that innervates at least one urinary, gastrointestinal, and/or other pelvic structure;
- providing operating power to the at least one stimulator;
- providing stimulation parameters to the at least one stimulator;
- generating stimulation pulses in accordance with the stimulation parameters; and
- delivering the stimulation pulses to nerves and tissue adjacent to the at least two electrodes in order to treat urinary and/or bowel dysfunction;

wherein the stimulator has a size and shape suitable for placement adjacent to the at least one sympathetic target;

- the stimulation pulses comprise inhibitory stimulation pulses; and
- the urinary and/or bowel dysfunction comprises urinary and/or fecal retention.

21. (previously presented) The method of Claim 20 wherein:

- the stimulation pulses further comprise excitatory stimulation pulses; and
- the urinary and/or bowel dysfunction further comprises urgency, frequency, urinary incontinence, and/or fecal incontinence; and

the method further includes delivering the excitatory stimulation pulses to nerve fibers adjacent to the at least two electrodes in order to treat urgency, frequency, urinary incontinence, and/or fecal incontinence.

22-24. (cancelled)

AB-125U

09/929,596

25. (original) The method of Claim 20 wherein the at least one sympathetic target comprises at least one of the thoracic roots, the thoracic spinal nerves, the lumbar roots, and the lumbar spinal nerves.

26. (original) The method of Claim 25 wherein the at least one sympathetic target comprises at least one of a root and a spinal nerve of at least one of T9, T10, T11, T12, L1, and L2.

27. (original) The method of Claim 20 wherein the at least one sympathetic target comprises at least one of the greater splanchnic nerve, the lesser splanchnic nerve, the least splanchnic nerve, the lumbar splanchnic nerves, the sacral splanchnic nerves, and their branches.

28. (original) The method of Claim 27 wherein the at least one sympathetic target comprises one or more of the hypogastric nerves, the superior hypogastric plexus, and the inferior hypogastric plexus.

29. (original) The method of Claim 20 further comprising:
providing at least one sensor;
using the at least one sensor to sense at least one physical condition; and
determining the stimulation parameters based upon the at least one sensed condition.

AB-125U

09/929,596

30. (original) The method of Claim 20 further comprising providing and implanting more than one stimulator.

31. (previously presented) A method for treating a patient with urgency, frequency, urinary incontinence, and/or fecal incontinence comprising the steps of:

- providing at least one means for stimulating tissue;
- implanting the at least one stimulating means adjacent to at least one parasympathetic target that innervates at least one urinary, gastrointestinal, and/or other pelvic structure;
- providing operating power to the at least one stimulating means;
- providing stimulation parameters to the at least one stimulating means;
- generating inhibitory stimulation pulses in accordance with the stimulation parameters; and
- delivering the inhibitory stimulation pulses to nerves and tissue adjacent to the at least one stimulating means to inhibit parasympathetic input to said urinary, gastrointestinal, and/or other pelvic structure in order to treat urgency, frequency, urinary incontinence, and/or fecal incontinence;

wherein the stimulating means has a size and shape suitable for placement adjacent to the at least one parasympathetic target.

32. (previously presented) A method for treating a patient with urinary and/or bowel dysfunction comprising the steps of:

- providing at least one means for stimulating tissue;
- implanting the at least one stimulating means adjacent to at least one sympathetic target that innervates at least one urinary, gastrointestinal, and/or other pelvic structure;

AB-125U

09/929,596

providing operating power to the at least one stimulating means;
providing stimulation parameters to the at least one stimulating means;
generating inhibitory stimulation pulses in accordance with the stimulation parameters; and
delivering the stimulation pulses to nerves and tissue adjacent to the at least one stimulating means to inhibit parasympathetic input to said urinary, gastrointestinal, and/or other pelvic structure in order to treat the urinary and/or bowel dysfunction;
wherein the stimulating means has a size and shape suitable for placement adjacent to the at least one sympathetic target.

33. (currently amended) A method of treating a patient with a bowel dysfunction, said method comprising:

applying one or more inhibitory stimulation pulses to a parasympathetic nerve within said patient with an implanted stimulator in accordance with one or more stimulation parameters to treat said bowel dysfunction.

34. (previously presented) The method of claim 33, wherein said bowel dysfunction comprises fecal incontinence.

35. (previously presented) The method of claim 33, wherein said parasympathetic nerve comprises at least one or more of a sacral nerve, a pelvic splanchnic nerve, a rectal nerve plexus, an inferior hypogastric nerve plexus, a prostatic nerve plexus, a vesical nerve plexus, and an uterovaginal nerve plexus.

AB-125U

09/929,596

36. (previously presented) The method of claim 33, further comprising sensing a condition related to said bowel dysfunction and using said at least one sensed condition to adjust one or more of said stimulation parameters.

37. (previously presented) A method of treating a patient with at least one bowel dysfunction, said method comprising:

applying one or more inhibitory stimulation pulses and one or more excitatory stimulation pulses to a parasympathetic nerve within said patient with an implanted stimulator in accordance with one or more stimulation parameters;

wherein said inhibitory stimulation pulses are configured to treat fecal incontinence and said excitatory stimulation pulses are configured to treat fecal retention.

38. (previously presented) The method of claim 37, wherein said parasympathetic nerve comprises at least one or more of a sacral nerve, a pelvic splanchnic nerve, a rectal nerve plexus, an inferior hypogastric nerve plexus, a prostatic nerve plexus, a vesical nerve plexus, and an uterovaginal nerve plexus.

39. (previously presented) The method of claim 37, further comprising sensing a condition related to said bowel dysfunction and using said at least one sensed condition to adjust one or more of said stimulation parameters.

40. (previously presented) A method of treating a patient with a bowel dysfunction, said method comprising:

AB-125U

09/929,596

applying one or more inhibitory stimulation pulses to a sympathetic nerve within said patient with an implanted stimulator in accordance with one or more stimulation parameters; wherein said bowel dysfunction comprises fecal retention.

41. (previously presented) The method of claim 40, further comprising:
applying one or more excitatory stimulation pulses to said sympathetic nerve within said patient with said implanted stimulator in accordance with said one or more stimulation parameters;
wherein said bowel dysfunction further comprises fecal incontinence.

42. (previously presented) The method of claim 40, wherein said parasympathetic nerve comprises at least one or more of a thoracic root, a thoracic spinal nerve, a lumbar root, a lumbar spinal nerve, a greater splanchnic nerve, a lesser splanchnic nerve, a least splanchnic nerve, a lumbar splanchnic nerves, and a sacral splanchnic nerve.

43. (previously presented) The method of claim 40, further comprising sensing a condition related to said bowel dysfunction and using said at least one sensed condition to adjust one or more of said stimulation parameters.

44. (currently amended) A system for treating a patient with a bowel dysfunction, said system comprising:
means for applying one or more inhibitory stimulation pulses to a parasympathetic nerve within said patient; and

AB-125U

09/929,596

means for generating said stimulation pulses in accordance with one or more stimulation parameters.

45. (currently amended) A system for treating a patient with at least one bowel dysfunction, said system comprising:

means for applying one or more inhibitory stimulation pulses to a parasympathetic nerve within said patient in accordance with one or more stimulation parameters; and

means for applying one or more excitatory stimulation pulses to a parasympathetic nerve within said patient in accordance with one or more stimulation parameters;

wherein said inhibitory stimulation pulses are configured to treat fecal incontinence and said excitatory stimulation pulses are configured to treat fecal retention.

46. (currently amended) A system for treating a patient with a bowel dysfunction, said system comprising:

means for applying one or more inhibitory stimulation pulses to a sympathetic nerve within said patient; and

means for generating said stimulation pulses in accordance with one or more stimulation parameters;

wherein said bowel dysfunction comprises fecal retention.